Product Series :	GBLH	Brand :	GOTREND
File Version :	GBLH-SERIES-AE	Editor :	Yinghui Guo
Established Date	2011.04.22	Description :	Multilayer Chip Inductor
Latest Edit Date :	2025.02.19	Product Type :	☑ Standard ☐ Customize

Version Information:

1	SN	Date	Version Code	Modify Description	Editior	Check
02 2023.04.11 V2R5 Convert the version format Qiuyi Wu Toby Zhang 03 2025.02.19 V2R6 Delete:GBLH160808PA-SERIES-AE、GBLH201209PA-SERIES-AE. Added:GBLH201610PB-SERIES-AE、GBLH201210PB-Yinghui Guo Yinghui Guo Toby Zhang	01	2020.09.17	V2R4	New version update release	1	Teddy Sun
Delete:GBLH160808PA-SERIES-AE、GBLH201209PA-SERIES-AE. SERIES-AE. Added:GBLH201610PB-SERIES-AE、GBLH201210PB-Yinghui Guo Toby Zhang					Qiuyi Wu	Toby Zhang
	03	2025.02.19	V2R6	SERIES-AE. Added:GBLH201610PB-SERIES-AE、GBLH201210PB-	Yinghui Guo	
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REMINDERS

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 Technology to check for the latest information before practical application or usage of the products.
- ♦ This catalog contains only typical specifications, please contact GOTREND Technology for further details if you can not find special components or information you need in this catalogue. Please also approve our product specifications or transact the approval sheet for product specifications before ordering.
- ◆ This catalogue only applies to products purchased through GOTREND Technology or its official agencies. This catalogue does not apply to products that are purchased through other third parties.
- Please read Attention and CAUTION note (for storage, operating, rating, soldering, mounting and handling) in this catalog to ensure
 product proper usage.
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- ◆ For exporting of product in this catalog, please take note it may be a restricted item according to the "Foreign Exchange and Foreign Trade Control Law". In such cases, it is necessary to acquire export permission in accordance to this law.
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- Products listed in this catalog are intended for general electronic device usage under normal operation and use condition including telecommunication equipment, home appliances, sports equipment AV equipment, industrial machine, office equipment etc. Please take note that our products are not designed, intended or authorized for use in below mentioned applications unless explicitly agreed in writing between the parties to avoid product failure that could result in situation where personal injury or death could occur.
 - (1) Aerospace/Aviation equipment
 - (2) Atomic energy-related equipment
 - (3) Disaster prevention/crime prevention equipment
 - (4) Electric heating apparatus, burning equipment
 - (5) Medical equipment
 - (6) Military equipment
 - (7) Power-generation control equipment
 - (8) Public information-processing equipment
 - (9) Safety equipment
 - (10) Seabed equipment
 - (11) Transportation control equipment
 - (12) Transportation equipment (cars, electric trains, ships, etc.)
 - (13) Other applications that are not considered general-purpose applications
- Our manufacturing sites fully compliance with requirement regarding the quality management system in the automotive industry under the IATF 16949 standard. GOTREND Technology respect individual agreements with reference to customer requirements and customer specific requirements (CSR). We will like to emphasize that only requirements mutually agreed upon will in implemented in our Quality Management System taking into consideration that IATF 16949 may appear to support the acceptance of unilateral requirements. We will only legally bind to this individually agreed upon agreement under the IATF 16949 standard.
- ◆ The product itself is a powder metallurgy product, so the structure is relatively fragile, and it should not be used for products that are easy to fall. In addition, when this product is assembled, it should avoid collision with the tool or mechanism shell.



♦ It is not recommended to use hot air gun for disassembling of this product. When using of hot air gun to repair other parts, please also take note that long time or high temperature exposure of this product will also damage the inductance device. If you need to use the hot air gun to disassemble the product, it is recommended to adjust the hot air gun temperature to 380 deg.C±5 deg.C. The blower head of the hot air gun should be perpendicular and at least 1cm away from the product. After heating the product to the tin material melting point, use tweezers to remove the product from the PCB.





Product Series :	GBLH	Brand :	GOTREND
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Features & Application:

Part No. Example:

5

- * Bead inductor for power energy storage or noise suppressor.
- * Fit for power line & signal line circuit.
- * To help you go pass the CE/FCC standard.
- * Mobil Device / Handheld Device / LowProfile Device / Panel...



(Picture for reference only)

Basic Information:

PN	:	GBLH 160809	Р	В	-	1R0	M	- AE	Made in	China
									Pin Foot	SMD
ID	:	1 2	3	4		5	6	7	Shielding	Yes
									J-STD-020	MSL Level 1
1	:	GOTREND Serie	s : GBL	.Н					RoHS	Compliant
2	:	Type Size Code:	16080	9 = 1.6 x	0.8 x 0.9	95 mm			REACH	Compliant
3	:	P = Pb free < 100	00 ppm						Halogen	Free
4	:	[B][L][Y]:Ma	aterial C	Code					Automotive	AEC Q200

Tolerance Code : M = +/-20%

Reliability comply with AEC-Q200 standard type.

Inductance: 1R0 = 1.0 uH



* Operating Temp $-55 \sim +125 \,^{\circ}\mathbb{C}$ (Including self - temperature rise) * Storage Temp $1. -10 \sim +45 \,^{\circ}\mathbb{C}$, $50 \sim 60\%$ RH (Product with taping)

2. -55 ~ +125 $^{\circ}$ C (On board)

* Storage Life Time $\,$ 6 Month (Less than 40 $\,$ $^{\circ}$ C and 60 $^{\circ}$ RH)



Attention & Caution :

* Keep out of Splashing water or salt water

* Avoid Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)

Vibrations or shocks which exceed the specified condition

Dew condense

Layout near the edge of PCB

Over flexure after SMT mounting & PCBA

- * Pin foot or SMD pad solderablility: Pb free type is best within 6 months after delivery
- * Humidity sensitive, IPC/JEDEC J-STD-020 MSL if over Level 1, recommend bake 30mins@150 degree before PCBA
- * Caution for human life relative applications : PLS contact & consult with GOTREND team in design stage.

Test Condition:

* Equipment HP4284A , HP42841A - L , Q , DCR , IDC

HP8753D Network analyzer - SRF

* Standard Atmosphere Conditions:

Ambient Temperature 20 ± 15 °C

Humidity RH 65 ± 20%

* If there may be any doubt on the test result,

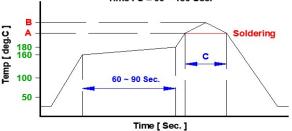
Measurement shall be made within the following limits:

Ambient Temperature 25 ± 5 °C

Humidity RH 75 ± 10%

Recommend IR Reflow Curve: GTX-IR-FILE001

Lead Free Solder : A = 217 deg.C , B = 245+/-5 deg.C , 5 ~ 10 Sec.
Time : C = 60 ~ 150 Sec.





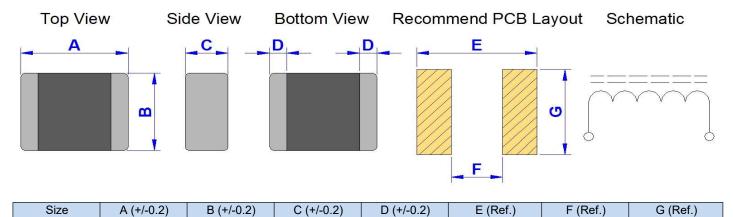
Notice : Iron Soldering , Solder < 30 Watt , Direct touch the terminal x 3 Sec. Max. @ 350 deg.C



GOTREND Product Series: GBLH Brand: Editor: File Version: **GBLH-SERIES-AE** Yinghui Guo **Established Date** 2011.04.22 **Description: Multilayer Chip Inductor Latest Edit Date:** 2025.02.19 **Product Type:** □ Customize

GBLH160808P□-SERIES-AE

Dimension [mm]:



Electrical Characteristics:

160808

Part No.	Inductance (uH)	Inductance Tolerance	Rated Current (mA) Max.	DCR (Ohm) Max.	SRF (MHz) Min.
GBLH160808P-R22M-AE	0.22	M	50	0.8	150
GBLH160808P-4R7M-AE	4.70	M	110	2.10	35
GBLH160808P-100M-AE	10.00	M	60	1.85	17
GBLH160808PY-2R2M-AE	2.20	M	650	0.30	1

0.30

2.00

0.90

1.00

1.60

08.0

0.80



^{*} Test Condition: @1.0MHz, 250m Vrms, 25°C Ambient

^{*} Inductance Tolerance : M = +/-20%

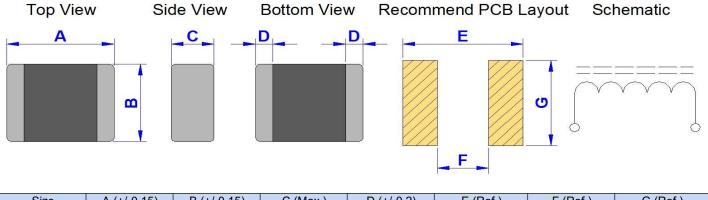
^{*} The maximum rated current: The DC current value having temperature increased 40 deg.C after thru DC current 2 hours at ambient temperature.

^{*} Regarding: To the inductance variability of rated current, please refer to Inductance Vs. DC superposition characteristics.

Product Series: GBLH **GOTREND** Brand: File Version: **GBLH-SERIES-AE** Editor: Yinghui Guo **Established Date** 2011.04.22 **Description: Multilayer Chip Inductor** 2025.02.19 **Product Type:** ☑ Standard **Latest Edit Date:** ☐ Customize

GBLH160809PB-SERIES-AE

Dimension [mm] :



Size	A (+/-0.15)	B (+/-0.15)	C (Max.)	D (+/-0.2)	E (Ref.)	F (Ref.)	G (Ref.)
160809	1.60	0.80	0.95	0.30	2.45	0.89	0.95

Electrical Characteristics:

Part No.	Inductance (uH)	Inductance Tolerance	Rated Current (mA) Max.	DCR (Ohm) Max.	DCR (Ohm) Typ.
GBLH160809PB-R33M-AE	0.33	M	350.0	0.35	0.27
GBLH160809PB-R50M-AE	0.50	M	900.0	0.15	0.12
GBLH160809PB-1R0M-AE	1.00	M	750.0	0.20	0.17
GBLH160809PB-2R2M-AE	2.20	M	650.0	0.30	0.27

* Test Condition : @1.0MHz , 60m Vrms , 25°C Ambient

* Inductance Tolerance : M = +/-20%

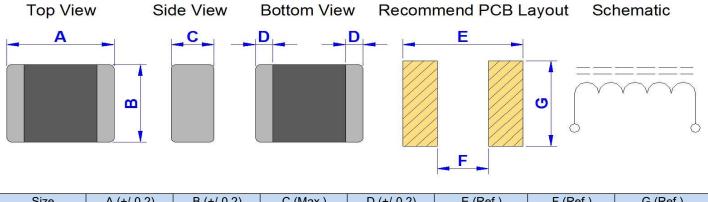
* Rated current: Based on temperature rise test.



Product Series :	GBLH	Brand :	GOTREND
File Version :	GBLH-SERIES-AE	Editor :	Yinghui Guo
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Latest Edit Date :	2025.02.19	Product Type :	☑ Standard ☐ Customize

GBLH201206P-SERIES-AE

Dimension [mm]:



Size	A (+/-0.2)	B (+/-0.2)	C (Max.)	D (+/-0.2)	E (Ref.)	F (Ref.)	G (Ref.)
201206	2.00	1.25	0.60	0.50	2.40	0.80	1.45

Part No.	Inductance (uH)	Inductance Tolerance	Rated Current (mA) Max.	DCR (Ohm) +/-30%
GBLH201206P-4R7M-AE	4.70	M	300.00	0.55

^{*} Test Condition : @1.0MHz , 250m Vrms , 25°C Ambient



^{*} Inductance Tolerance : M = +/-20%

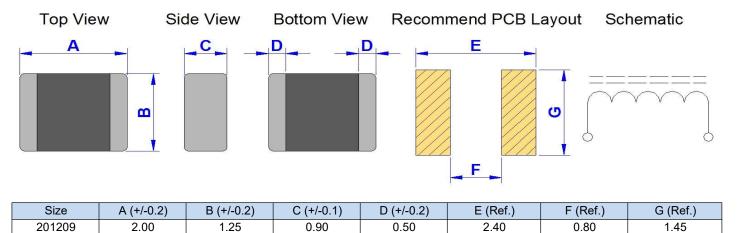
^{*} The maximum rated current: The DC current value having temperature increased 40 deg.C after thru DC current 2 hours at ambient temperature.

^{*} **Regarding :** To the inductance variability of rated current , please refer to Inductance Vs. DC superposition characteristics.

GOTREND Product Series: GBLH Brand: Yinghui Guo **GBLH-SERIES-AE** Editor: File Version: **Established Date** 2011.04.22 **Description: Multilayer Chip Inductor** 2025.02.19 **Latest Edit Date: Product Type:** ☐ Customize

GBLH201209P□-SERIES-AE

Dimension [mm]:



Part No.	Inductance (uH)	Inductance Tolerance	Rated Current (mA) Max.	DCR (Ohm) +/-25%	SRF (MHz) Min.
GBLH201209P-R47M-AE	0.47	M	1100	0.10	100
GBLH201209P-1R0M-AE	1.00	M	800	0.16	90
GBLH201209P-1R5M-AE	1.50	M	700	0.22	70
GBLH201209P-2R2M-AE	2.20	M	600	0.25	50
GBLH201209P-3R3M-AE	3.30	M	500	0.22	40
GBLH201209P-4R7M-AE	4.70	M	400	0.30	30
GBLH201209PL-1R0M-AE	1.00	M	1200	0.11	90
GBLH201209PL-2R2M-AE	2.20	M	800	0.25	50
GBLH201209PL-3R3M-AE	3.30	M	900	0.19	40
GBLH201209PL-4R7M-AE	4.70	M	800	0.25	30

^{*} Test Condition : @1.0MHz , 250m Vrms , 25°C Ambient



^{*} Inductance Tolerance : M = +/-20%

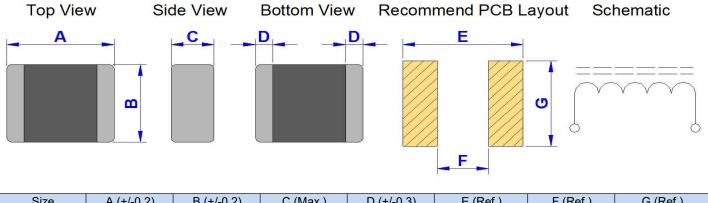
^{*} The maximum rated current: The DC current value having temperature increased 40 deg.C after thru DC current 2 hours at ambient temperature.

^{*} Regarding: To the inductance variability of rated current, please refer to Inductance Vs. DC superposition characteristics.

Product Series: GBLH **GOTREND** Brand: File Version: **GBLH-SERIES-AE** Editor: Yinghui Guo **Established Date** Multilayer Chip Inductor 2011.04.22 **Description:** 2025.02.19 **Product Type: Latest Edit Date:** ☑ Standard ☐ Customize

GBLH201209PB-SERIES-AE

Dimension [mm] :



Size	A (+/-0.2)	B (+/-0.2)	C (Max.)	D (+/-0.3)	E (Ref.)	F (Ref.)	G (Ref.)
201209	2.00	1.25	1.00	0.50	3.10	1.00	1.45

Part No.	Inductance (uH)	Inductance Tolerance	Rated Current (mA) Max.	DCR (Ohm) Max.	DCR (Ohm) Typ.
GBLH201209PB-R47M-AE	0.47	M	1200.0	0.08	0.06
GBLH201209PB-1R0M-AE	1.00	M	1000.0	0.14	0.11
GBLH201209PB-1R5M-AE	1.50	M	800.0	0.20	0.15
GBLH201209PB-2R2M-AE	2.20	M	800.0	0.20	0.15
GBLH201209PB-3R3M-AE	3.30	M	700.0	0.24	0.20
GBLH201209PB-4R7M-AE	4.70	M	700.0	0.28	0.23

^{*} Test Condition: @1.0MHz, 60m Vrms, 25°C Ambient



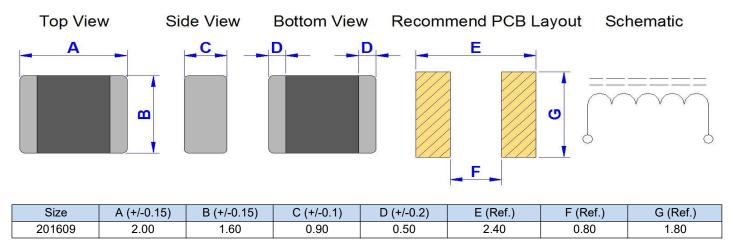
^{*} Inductance Tolerance : M = +/-20%

^{*} Rated current: Based on temperature rise test.

Product Series: GBLH Brand: **GOTREND GBLH-SERIES-AE** Editor: File Version: Yinghui Guo **Established Date** 2011.04.22 **Description: Multilayer Chip Inductor** 2025.02.19 **Latest Edit Date: Product Type:** □ Customize

GBLH201609P-SERIES-AE

Dimension [mm] :



Part No.	Inductance (uH)	Inductance Tolerance	Rated Current (mA) Max.	DCR (Ohm)	SRF (MHz) Min.
GBLH201609P-R68M-AE	0.68	M	1500	0.15+/-30%	90
GBLH201609P-R82M-AE	0.82	M	1500	0.16+/-30%	80
GBLH201609P-1R0M-AE	1.00	M	1700	0.077~0.143	60
GBLH201609P-1R2M-AE	1.20	M	1700	0.077~0.143	60
GBLH201609P-1R5M-AE	1.50	M	1500	0.098~0.182	50
GBLH201609P-1R8M-AE	1.80	M	1500	0.098~0.182	50
GBLH201609P-2R2M-AE	2.20	M	1300	0.126~0.234	40
GBLH201609P-2R7M-AE	2.70	M	1300	0.126~0.234	40
GBLH201609P-3R3M-AE	3.30	M	1100	0.161~0.299	30
GBLH201609P-3R9M-AE	3.90	M	1100	0.161~0.299	30
GBLH201609P-4R7M-AE	4.70	M	900	0.161~0.299	30

^{*} Test Condition: @1.0MHz, 250m Vrms, 25°C Ambient



^{*} Inductance Tolerance : M = +/-20%

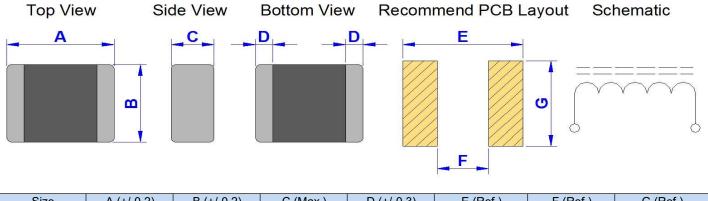
^{*} The maximum rated current: The DC current value having temperature increased 40 deg.C after thru DC current 2 hours at ambient temperature.

^{*} Regarding: To the inductance variability of rated current, please refer to Inductance Vs. DC superposition characteristics.

Product Series: GBLH **GOTREND** Brand: File Version: **GBLH-SERIES-AE** Editor: Yinghui Guo **Established Date** Multilayer Chip Inductor 2011.04.22 **Description:** 2025.02.19 **Product Type: Latest Edit Date:** ☑ Standard ☐ Customize

GBLH201610PB-SERIES-AE

Dimension [mm] :



Size	A (+/-0.2)	B (+/-0.2)	C (Max.)	D (+/-0.3)	E (Ref.)	F (Ref.)	G (Ref.)
201610	2.00	1.60	1.00	0.50	3.10	1.00	1.75

Part No.	Inductance (uH)	Inductance Tolerance	Rated Current (mA) Max.	DCR (Ohm) Max.	DCR (Ohm) Typ.
GBLH201610PB-R47M-AE	0.47	M	1600.0	0.075	0.06
GBLH201610PB-1R0M-AE	1.00	M	1300.0	0.12	0.09
GBLH201610PB-1R5M-AE	1.50	M	1200.0	0.13	0.10
GBLH201610PB-2R2M-AE	2.20	M	1200.0	0.14	0.11
GBLH201610PB-3R3M-AE	3.30	M	1100.0	0.16	0.13
GBLH201610PB-4R7M-AE	4.70	M	900.0	0.20	0.16

^{*} Test Condition: @1.0MHz, 60m Vrms, 25°C Ambient



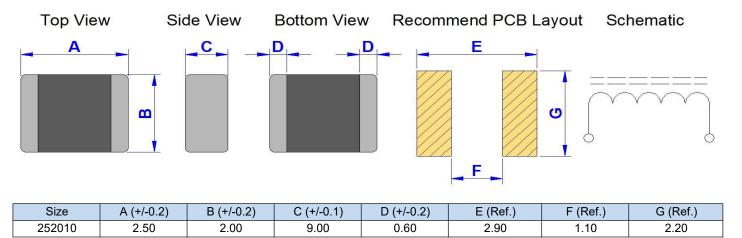
^{*} Inductance Tolerance : M = +/-20%

^{*} Rated current: Based on temperature rise test.

Product Series: GBLH Brand: **GOTREND GBLH-SERIES-AE** Editor: File Version: Yinghui Guo **Established Date** 2011.04.22 **Description: Multilayer Chip Inductor** 2025.02.19 **Latest Edit Date: Product Type:** □ Customize

GBLH252010P-SERIES-AE

Dimension [mm]:



Part No.	Inductance (uH)	Inductance Tolerance	Rated Current (mA) Max.	DCR (Ohm) +/-25%	SRF (MHz) Min.
GBLH252010P-R47M-AE	0.47	M	1800	0.07	100
GBLH252010P-1R0M-AE	1.00	M	1600	0.11	60
GBLH252010P-1R5M-AE	1.50	M	1500	0.13	50
GBLH252010P-2R2M-AE	2.20	M	1300	0.16	40
GBLH252010P-3R3M-AE	3.30	M	1200	0.17	30
GBLH252010P-4R7M-AE	4.70	M	1100	0.20	25

^{*} Test Condition: @1.0MHz, 250m Vrms, 25°C Ambient



^{*} Inductance Tolerance : M = +/-20%

^{*} The maximum rated current: The DC current value having temperature increased 40 deg.C after thru DC current 2 hours at ambient temperature.

^{*} Regarding: To the inductance variability of rated current, please refer to Inductance Vs. DC superposition characteristics.

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Care note:

Care note for Use:

(1) Storage Condition:

Temperature 25 to 35 °C, Humidity 45 to 60% RH

(2) Use Temperature:

- a. Minimum Temperature : -55 $^{\circ}$ C Ambient temperature of this product.
- b. Maximum Temperature : +125 °C The value of temperature including ambient and temperature rise of this product.
- c. Reliability test temperature range from -55 ~ +125 °C
- d. However, this is not meant as temperature grade guarantee for UL.

(3) Model:

When this product was used in a similar or as new product to the original one, sometimes it might be unable to satisfy the specifications due to difference in condition of usage.

(4) Drop:

If this product suffered mechanical stress such as drop, characteristics may become poor (due to damage on coil / bobbin / ferrite ... etc.)

Never use such stressed product.

Care note for Safety:

(1) Provision to Abnormal Condition:

This product itself does not have any protective function in abnormal condition such as overload, short-circuit and open-circuit conditions, etc.

Therefore, it shall be confirmed from the end product that there is no risk of smoking, fire, dielectric withstand voltage insulation resistance, etc. in abnormal conditions to provide protective devices and /or protection circuit in the end product.

(2) Temperature Rise:

Temperature rise on this product depends on the installation condition on end products.

It shall be confirmed on the actual end product that temperature rise of this product is within the specified temperature class limit.

(3) Dielectric Strength:

Dielectric withstanding test with higher voltage than specific value will damage insulating material and shorten its life.

(4) Water:

This product must not be used in wet condition resulted from water, coffee or any liquid contact because insulation strength becomes very low under such condition.

(5) Potting

If this product is potted in some compound, coating material of magnet wire might be occasionally damaged. Please ask us if you intend to pot this product.

(6) Detergent :

Please consult our company immediately once under such circumstances because product reliability confirmation etc. is needed when this product come in contact with these chemicals.



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Reliability for automotive products :

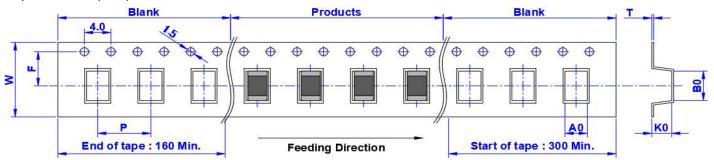
External Visual MiL-STD-883 Electrical test not required.	No	Item	Test Conditions	Specification		
Method 2009 Verify physical dimensions to the device JESD22 Method JB-100 Thermal Shock MIL-STD-202 Method 107 Dwell time: 1.55±2 °C +1125±2 °C Method 107 Dwell time: 1.5 minutes. Air - Air did not fall off., loose, no breakage, ferrite core did not break, damage minutes in the device off of the presentation of the device off of the presentation of the device of the device off of the device of the d	1	External Visual	Inspect device construction and workmanship.	There is no change for appearance (electrode		
Physical Dimension JESD22 Method JB-100 Specification.		MIL-STD-883	Electrical test not required.	did not fall off , loose , no breakage , ferrite core		
JESD22 specification. Method JB-100 Thermal Shock MIL-STD-202 Max transfer time : 20 s.		Method 2009		did not break , damage)		
Method JB-100 Thermal Shock MIL-STD-202 Max transfer time: 20 s. Method 107 Dwell time: 15 minutes. Air - Air Humidity Resistance MIL-STD-202 Method 103 Temperature: 85 °C Method 103 Temperature: 85 °C Method 103 Temperature: 85 °C Method 103 Temperature: 125±2 °C Method 103 Temperature: 125±2 °C Method 103 Temperature: 125±2 °C Method 108 Temperature: 1000 Hours Temperature: 125±2 °C Method 108 Temperature: 125±2 °C Method 108 Temperature: 125±2 °C Method 108 Temperature: 1000 Hours Temperature: 125±3 °C Method 108 Temperature: 125±3 °C Method 204 Test from 10Hz ~ 2000Hz Temperature: 125 °C Method 213 Temperature: 125 °C Method 210 Temperature: 125 °C Met	2	Physical Dimension	Verify physical dimensions to the device	For Spec.		
Thermal Shock MIL-STD-202 Method 107 Method 107 Method 107 Method 107 Method 107 Method 107 Temperature : -55±2 °C ~ +125±2 °C Method 107 Method 107 Method 107 Method 107 Method 107 Method 107 Method 108 Method 108 Temperature : 150 °C Method 108 Temperature : 85 °C Method 108 Method 108 Temperature : 125±2 °C Method 108 Temperature : 125±2 °C Method 108 Temperature : 1000 Hours Temperature : 125±2 °C Method 108 Temperature : 1000 Hours Test time : 1000 Hours Test ti		JESD22	specification.			
MIL-STD-202 Method 107 Method 108 Humidity Resistance Humidity: 85% RH Temperature: 85 °C Method 103 Test time: 1000 Hours Mil-STD-202 Method 108 High Temperature and Humidity Cycle JESD22 Method JA-104 7 Operational Life Mil-PRF-27 Mil-STD-202 Method 204 Test time: 125 °C Method 204 Test time: 125 °C Test time: 125 °C Method 108 Temperature: 25 °C ~ +125 °C There is no change for appearance (electrode did not fall off , loose , no breakage , ferrite core did not fall off , loose , no breakage , ferrite core did not fall off , loose , no breakage , ferrite core did not fall off , loose , no breakage , ferrite core did not fall off , loose , no breakage , ferrite core did not break , damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off , loose , no breakage , ferrite core did not break , damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off , loose , no breakage , ferrite core did not break , damage) Inductor value / resistance change rate ±10%. No short circuit , open circuit. No bad phenomenon. Figure 1 of Method 213 SMD : Condition C. Mill-STD-202 Method 213 Resistance to Soldering Head Mill-STD-202 Method 210 A Method B @ 215 °C category 3 Method B @ 215 °C category 3		Method JB-100				
Method 107 Dwell time: 15 minutes. Air - Air did not break, damage) Inductor value / resistance change rate ±10%. Humidity Resistance MIL-STD-202 Method 103 Test time: 1000 Hours Temperature MIL-STD-202 Method 108 Temperature: 125±2 °C Method 108 Test time: 1000 Hours Temperature: 125±2 °C Method 108 Temperature and Humidity Cycle JESD22 Method JA-104 Temperature: 125 °C MIL-PRF-27 Apperature: 125 °C Mil-PRF-27 Will-STD-202 Method JA-104 Temperature: 125 °C Mill-STD-202 Method JA-104 Temperature: 125 °C Method JA-104 Test time: 1000 Hours Wibration MIL-STD-202 Method 204 Test from 10Hz ~ 2000Hz Mechanical Shock MIL-STD-202 Method 213 Temperature: 250 up / 5 s. Method 210 Temperature: 250 up / 5 s. Method 210 Method B @ 215 °C category 3	3	Thermal Shock	Temperature : -55±2 °C ~ +125±2 °C	There is no change for appearance (electrode		
Humidity Resistance Humidity : 85% RH There is no change for appearance (electrode did not fall off, loose , no breakage , ferrite core did not break , damage) Inductor value / resistance change rate ±10%.		MIL-STD-202	Max transfer time : 20 s.	did not fall off , loose , no breakage , ferrite core		
Humidity Resistance MIL-STD-202 Method 103 Temperature : 85 °C Test time : 1000 Hours Inductor value / resistance change rate ±10%. High Temperature MIL-STD-202 Method 108 Temperature : 125±2 °C Test time : 1000 Hours Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. No short circuit, open circuit. No bad phenomenon. Test from 10Hz ~ 2000Hz Method 213 Test from 10Hz ~ 2000Hz Method 213 Test from 10Hz ~ 2000Hz Method 213 Temperature 250 up / 5 s. Temperature 25		Method 107	Dwell time : 15 minutes. Air - Air	did not break , damage)		
MIL-STD-202 Method 103 Temperature : 85 °C Test time : 1000 Hours Temperature : 125±2 °C Method 108 Temperature : 125±2 °C Method 108 Temperature : 125±2 °C Method 108 Temperature : 1000 Hours Test time : 1000 Hours Temperature and Hunidity Cycle JESD22 Method JA-104 Temperature : 125 °C MIL-PRF-27 MIL-PRF-27 Temperature : 125 °C Load : Allowed DC current Test time : 1000 Hours Test time : 1000 Hours Test time : 1000 Hours No short circuit , open circuit. No short circuit , open circuit. No bad phenomenon. Test from 10Hz ~ 2000Hz Mechanical Shock MIL-STD-202 Method 213 Temperature : 250 up / 5 s. Temperature : 285 °C D. Method B @ 215 °C dry heat J-STD-002 Method 204 A Method B @ 215 °C dry heat J-STD-002 Method 204 A Method B @ 215 °C dry heat J-STD-002 Method B @ 215 °C category 3				Inductor value / resistance change rate ±10%.		
Method 103 Test time : 1000 Hours Inductor value / resistance change rate ±10%.	4	Humidity Resistance	Humidity: 85% RH	There is no change for appearance (electrode		
Inductor value / resistance change rate ±10%.		MIL-STD-202	Temperature : 85 °C	did not fall off , loose , no breakage , ferrite core		
High Temperature MIL-STD-202 Test time: 1000 Hours Temperature: 125±2 °C Test time: 1000 Hours Temperature and Humidity Cycle JESD22 Method JA-104 Temperature: 125 °C Cycles: 1000 Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off , loose , no breakage , ferrite core did not break , damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off , loose , no breakage , ferrite core did not break , damage) Inductor value / resistance change rate ±10%. No short circuit , open circuit. No bad phenomenon. Temperature 250 up / 5 s. Temperature 183 up / 90 ~ 120 s. No change and transform form the appearance. No change		Method 103	Test time : 1000 Hours	did not break , damage)		
MIL-STD-202 Method 108 Test time: 1000 Hours did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not break, damage) Inductor value / resistance change rate ±10%. There is no change for appearance (electrode did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. Toperational Life MIL-PRF-27 Load: Allowed DC current Test time: 1000 Hours Vibration MIL-STD-202 Method 204 Test from 10Hz ~ 2000Hz Mechanical Shock MIL-STD-202 Method 213 Temperature: 125 °C Load: Allowed DC current Test from 10Hz ~ 2000Hz Mechanical Shock MIL-STD-202 Method 213 Temperature 250 up / 5 s. Temperature 250 up / 5 s. Temperature 250 up / 5 s. Temperature 183 up / 90 ~ 120 s. Method 210 A Method B @ 215 °C category 3 Mo change and transform form the appearance. Mo change and transform form the appearance.				Inductor value / resistance change rate ±10%.		
MIL-STD-202 Method 108 Test time: 1000 Hours did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. Temperature and Humidity Cycle JESD22 Method JA-104 Temperature: 125 °C Method JA-104 Temperature: 125 °C Method JA-104 Temperature: 125 °C Mill-PRF-27 Load: Allowed DC current Test time: 1000 Hours Wibration Mill-STD-202 Method 204 Method 204 Test from 10Hz ~ 2000Hz Mechanical Shock Mill-STD-202 Method 213 Temperature: 125 °C Load: Allowed DC current Test time: 1000 Hours Test from 10Hz ~ 2000Hz Figure 1 of Method 213 SMD: Condition C. Mill-STD-202 Method 210 Resistance to Soldering Head Mill-STD-202 Method 210 A. Method B, 4 Hours @ 155 °C dry heat @ 235 °C b. Method B @ 215 °C category 3 did not fall off, loose, no breakage, ferrite core did not break, damage) Inductor value / resistance change rate ±10%. No short circuit, open circuit. No short circuit, open circuit. No bad phenomenon. No bad phenomenon. Tin solder have to cover over 90% area. No change and transform form the appearance. @ 235 °C b. Method B @ 215 °C category 3	5	High Temperature	Temperature : 125±2 ℃	There is no change for appearance (electrode		
Inductor value / resistance change rate ±10%. Temperature and Humidity Cycle JESD22 Method JA-104 Temperature: 125 °C Cycles: 1000 There is no change for appearance: 1000 There is no change in change; 1000 There is no change in change; 1000 There is no change; no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off, loose, no breakage, ferrite core did not fall off,		MIL-STD-202	Test time : 1000 Hours	did not fall off , loose , no breakage , ferrite core		
Temperature and Humidity Cycle JESD22 Method JA-104 7 Operational Life MIL-PRF-27 8 Vibration MIL-STD-202 Method 213 10 Resistance to Soldering Head MIL-STD-202 Method 210 11 Solderability J-STD-002 Method 3 P-SD S C Sc St S C S C S S C C St S S C C at y heat Method 2 B S S C S S S C S D Fersiles A st S S S S S C S S S S S S S S S S S S S		Method 108		did not break , damage)		
Temperature and Humidity Cycle JESD22 Method JA-104 7 Operational Life MIL-PRF-27 8 Vibration MIL-STD-202 Method 213 10 Resistance to Soldering Head MIL-STD-202 Method 210 11 Solderability J-STD-002 Method 3 P-SD S C Sc St S C S C S S C C St S S C C at y heat Method 2 B S S C S S S C S D Fersiles A st S S S S S C S S S S S S S S S S S S S						
Humidity Cycle JESD22 Method JA-104 7 Operational Life MIL-PRF-27	6	Temperature and	Temperature : -55 °C ~ +125 °C	-		
Method JA-104 7		Humidity Cycle	Cycles : 1000	did not fall off , loose , no breakage , ferrite core		
Method JA-104 7		1		_		
7 Operational Life MIL-PRF-27		Method JA-104		- ·		
Test time: 1000 Hours 5 g's for 20 minutes, 12 cycles each of 3 MIL-STD-202 Method 204 Mechanical Shock MIL-STD-202 Method 213 Test from 10Hz ~ 2000Hz Figure 1 of Method 213 SMD: Condition C. No bad phenomenon. No bad phenomenon. No bad phenomenon. Tin solder have to cover over 90% area. Tin solder have to cover over 90% area. Temperature 250 up / 5 s. Temperature 250 up / 5 s. Temperature 183 up / 90 ~ 120 s. Method 210 Solderability J-STD-002 A Method B Q 215 °C category 3	7	Operational Life	Temperature : 125 ℃	No short circuit , open circuit.		
Vibration Sig's for 20 minutes , 12 cycles each of 3 No bad phenomenon.		MIL-PRF-27	Load : Allowed DC current			
MIL-STD-202 Mechanical Shock MIL-STD-202 Method 213 Pesistance to Soldering Head MIL-STD-202 Method 210 Solderability J-STD-002 Method B @ 215 °C category 3 orientations. Test from 10Hz ~ 2000Hz Figure 1 of Method 213 SMD : Condition C. No bad phenomenon. No bad phenomenon. No bad phenomenon. Tin solder have to cover over 90% area. No change and transform form the appearance.			Test time : 1000 Hours			
MIL-STD-202 Mechanical Shock MIL-STD-202 Method 213 Pesistance to Soldering Head MIL-STD-202 Method 210 Solderability J-STD-002 Method B @ 215 °C category 3 orientations. Test from 10Hz ~ 2000Hz Figure 1 of Method 213 SMD : Condition C. No bad phenomenon. No bad phenomenon. No bad phenomenon. Tin solder have to cover over 90% area. No change and transform form the appearance.	8	Vibration	5 g's for 20 minutes , 12 cycles each of 3	No bad phenomenon.		
9 Mechanical Shock MIL-STD-202 Method 213 10 Resistance to Soldering Head MIL-STD-202 Method 210 11 Solderability J-STD-002 Soldering Head MIL-STD-002 Solderability J-STD-002 Method B @ 215 °C category 3 No bad phenomenon.		MIL-STD-202				
9 Mechanical Shock MIL-STD-202 Method 213 10 Resistance to Soldering Head MIL-STD-202 Method 210 11 Solderability J-STD-002 Soldering Head MIL-STD-002 Solderability J-STD-002 Method B @ 215 °C category 3 No bad phenomenon.		Method 204	Test from 10Hz ~ 2000Hz			
MIL-STD-202 Method 213 10 Resistance to Soldering Head MIL-STD-202 Method 210 11 Solderability J-STD-002 Method B @ 215 °C category 3 Condition B No pre-heat of samples. Tin solder have to cover over 90% area. Tin solder have to cover over 90% area. No change and transform form the appearance.	9	Mechanical Shock	Figure 1 of Method 213 SMD : Condition C.	No bad phenomenon.		
10 Resistance to Soldering Head MIL-STD-202 Method 210 11 Solderability J-STD-002 Condition B No pre-heat of samples. Temperature 250 up / 5 s. Temperature 183 up / 90 ~ 120 s. Temperature 183 up / 90 ~ 120 s. Temperature 183 up / 90 ~ 120 s. No change and transform form the appearance. @ 235 °C b. Method B @ 215 °C category 3		MIL-STD-202				
Soldering Head MIL-STD-202 Method 210 11 Solderability J-STD-002 A. Method B @ 215 °C category 3 Temperature 250 up / 5 s. Temperature 183 up / 90 ~ 120 s. Temperature 183 up / 90 ~ 120 s. No change and transform form the appearance.		Method 213				
Soldering Head MIL-STD-202 Method 210 11 Solderability J-STD-002 A. Method B @ 215 °C category 3 Temperature 250 up / 5 s. Temperature 183 up / 90 ~ 120 s. Temperature 183 up / 90 ~ 120 s. No change and transform form the appearance.	10	Resistance to	Condition B No pre-heat of samples.	Tin solder have to cover over 90% area.		
MIL-STD-202 Method 210 11 Solderability J-STD-002 A. Method B, 4 Hours @ 155 °C dry heat @ 235 °C b. Method B @ 215 °C category 3		Soldering Head	· ·			
Method 210 11 Solderability J-STD-002 a. Method B , 4 Hours @ 155 °C dry heat @ 235 °C b. Method B @ 215 °C category 3		1				
11 Solderability J-STD-002 a. Method B , 4 Hours @ 155 °C dry heat @ 235 °C b. Method B @ 215 °C category 3 No change and transform form the appearance.			·			
J-STD-002 @ 235 °C b. Method B @ 215 °C category 3	11		a. Method B , 4 Hours @ 155 °C dry heat	No change and transform form the appearance.		
b. Method B @ 215 °C category 3		1				
			1 9			
			c. Method D @ 260 °C category 3			



Product Series :	GBLH	Brand :	GOTREND
File Version :	GBLH-SERIES-AE	Editor :	Yinghui Guo
Established Date	2011.04.22	Description :	Multilayer Chip Inductor
Latest Edit Date :	2025.02.19	Product Type :	✓ Standard ☐ Customize

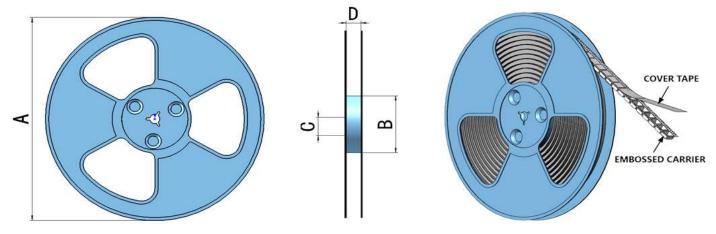
Packaging Information:

Tape Dimension (mm)



SIZE/mm	W	Р	A0	В0	K0	Т	F
160808	8.00	4.00	1.10	1.90	0.95	0.23	3.50
160809PB	8.00	4.00	1.00	1.80	1.10	1.10	3.50
201206	8.00	4.00	1.53	2.40	1.23	0.23	3.50
201209	8.00	4.00	1.88	2.40	1.23	0.23	3.50
201209PB	8.00	4.00	1.55	2.30	1.30	0.30	3.50
201609	8.00	4.00	1.88	2.40	1.23	0.23	3.50
201610PB	8.00	4.00	1.80	2.20	1.30	0.25	3.50
252010	8.00	4.00	2.20	2.85	1.40	0.23	3.50

Reel Dimension (mm)



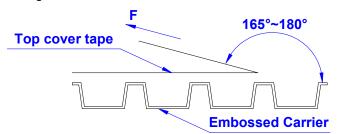
SIZE/mm	REEL SIZE	А	В	С	D	QTY / REEL
160808	7" x 8 mm	178	60	13	8.5	4,000 PCS
160809PB	7" x 8 mm	178	60	13	8.5	4,000 PCS
201206	7" x 8 mm	178	60	13	8.5	4,000 PCS
201209	7" x 8 mm	178	60	13	8.5	4,000 PCS
201209PB	7" x 8 mm	178	60	13	8.5	3,000 PCS
201609	7" x 8 mm	178	60	13	8.5	3,000 PCS
201610PB	7" x 8 mm	178	60	13	8.5	3,000 PCS
252010	7" x 8 mm	178	60	13	8.5	3,000 PCS



Product Series :	GBLH	Brand :	GOTREND		
File Version :	GBLH-SERIES-AE	Editor :	Yinghui Guo		
Established Date	2011.04.22	Description :	Multilayer Chip Inductor		
Latest Edit Date :	2025.02.19	Product Type :	☑ Standard ☐ Customize		

Packaging Information:

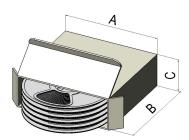
Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions (referenced ANSI / EIA - 481 - D - 2008 of 4.11stadnard).

Room Temp. (°C)	Room Humidity (%)	Room Atm. (hPa)	Tearing Speed (mm / min)	
5 ~ 35	45 ~ 85	860 ~ 1060	300	





D (4)

7" Small Box

7" Large Box

SIZE/mm	Rells size	Α	В	С	Large Box	D	Е	F	Reels in Small Box (QTY)	Small Box in Large Box(QTY)
160808	7''	190	195	75	7''	408	210	220	5(20,000)	5(100,000)
160809PB	7"	190	195	75	7"	408	210	220	5(20,000)	5(100,000)
201206	7"	190	195	75	7"	408	210	220	5(20,000)	5(100,000)
201209	7"	190	195	75	7"	408	210	220	5(20,000)	5(100,000)
201209PB	7"	190	195	75	7"	408	210	220	5(15,000)	5(75,000)
201609	7"	190	195	75	7"	408	210	220	5(15,000)	5(75,000)
201610PB	7"	190	195	75	7"	408	210	220	5(15,000)	5(75,000)
252010	7"	190	195	75	7"	408	210	220	5(15,000)	5(75,000)

